

**Vector Control Strategies Workshop  
@The 2019 World Malaria Day  
by the CMRAP in collaboration with  
THE SJS COOKEY MALARIA CHAIR**

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**ACE-CEFOP- UNIPORT 23-24 APRIL, 2019**

# PLAN OF PRESENTATION

A- Malaria Vector Biology

1- Vector- Parasite- Host

2- Local Breeding sites for Vectors

a- Natural habitats of vectors

b- Artificial – Anthropogenic (Man-made) habitats

c- Architectural Designs

i- Housing & Urban Planning

ii- Schools & Hospitals

3- Geography of the State/Nation

4- Education and Health towards the Antimalaria campaign

B- Cultural Control Methods of vectors

# Malaria Host Vector Parasite

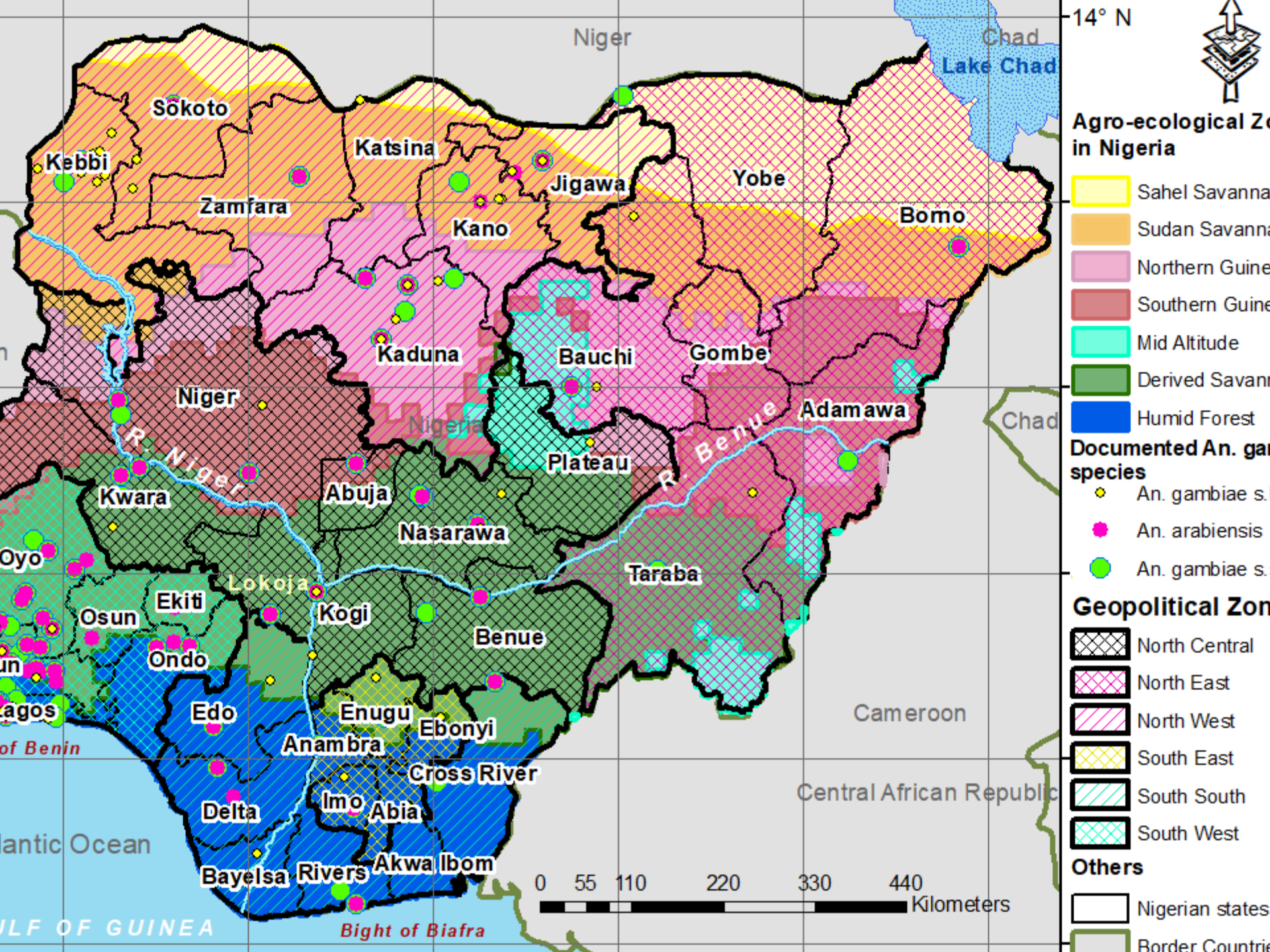
- The human Pathogen- Plasmodium: 5 species
- *Plasmodium knowlesi*,
- *Plasmodium vivax*,
- *Plasmodium malariae*,
- *Plasmodium ovale*,
- *Plasmodium falciparum*
- The Host: *Homo sapiens* (no discrimination)
- The Vector: Anopheles: 2 Major species
- *Anopheles gambiae* complex,
- *Anopheles funestus* group

# **GOVERNMENT**

- DOES ANYBODY KNOW  
A CHILD WHO WAS  
NAMED GOVERNMENT  
AT BIRTH?**

# ANSWERS

- Not that I know of, Maybe you know Mr. Government!
- Government is YOU & I - not the Politicians, not the Public Office Holders – Nobody Else but us!
- WE HAVE ALL FAILED that is why 2 complexes of insects and 5 species Protozoans are defeating us
- What is the way forward:
- STOP DOING ALL THE OLD THINGS AND EXPECTING DIFFERENT OR NEW RESULTS- UTOPIA



# **INTEGRATED MULTIDISCIPLINARY APPROACH TO THE MALARIA CAMPAIGN**

- **Physicians (Doctors)**
- **Vector biologists**
- **Medical laboratory scientists (Parasitologists)**
- **Pharmacists**
- **Community Focal Health Staff**
- **Research Scientists/ Teaching Institutions**
- **Organizations (Governmental, NGOs, Faith-based)**

# A- Malaria Vector Biology

## 2- Local Breeding sites for Vectors

### a- Natural habitats of vectors

- Slow flowing Streams
- Stagnant lakes

### b- Artificial – Anthropogenic (Man-made) habitats

- Ponds/Wells
- Containers/ basins/ Buckets (Plastics, Iron, Calabash)
- Phytothelmata (trunk of fallen/live trees,)
- Plant Axils/ Flower pots or Vases
- Water Receptacles



# C- Architectural Designs

Urbanization and Industrialization link to Construction and migration

i- Housing & Urban Planning

Roof gutters

Drainages

Sewages

Water supply

ii- Schools & Hospitals

- Convergence of humans (Hosts) is associated with migration of pathogens and vectors
- Change in feeding **Zoophagy** to **anthropophagy**

# 3-Geography of the State/Nation

i-Lowland

ii- Coastal

a-Mangrove Swamp

b- Beaches

iii- marine ecosystem

iv- Forest area (Equatorial, Primary, Secondary)

v- Arid zones

# 4- Education and Health towards the Antimalaria campaign

- Changes in Attitudes to Health
- Participatory observation for each and every intervention
- Introduction of compulsory vector biology training in every national examination
- Addition of entomology to the 1<sup>ST</sup> CLASS presidential scholarship scheme
- Stop recruiting non entomologists to teach medical entomology
- Number Profs of Entomology in AKS, RS, BS= 2 no medical

# Cultural Control Methods of vectors

- Malaria existed before many scientific discoveries
- Humans by survival instinct sought solutions to this health challenge that kills more troops than bullets
- HOW were they doing it? We need to go back to the drawing board to the very senior elders in our communities that is Septuagenarians (70yrs), Octogenarians (80yrs), Nonagenarians (90yrs) and above before they all join their ancestors and we have no solutions to this scourge.

# How I am fighting Malaria at my level

## i- Physical control

- Dressing style (all covered) for evening functions
- Dressing colours (bright) for evening/night functions
- Outlets (Obiri, Veranda, Window and Door) netting

## ii- Mechanical control (clear drainages, ditches, wells of larvae)

## iii- Environmental sanitation: IT'S NOT A MERE OBSERVANCE!!!

## iv- Proper waste disposal- Degradable: organic;

Recycle: glass, plastics

## v- botanicals Lemon grass, scent leave, yellow bush, orange peels, kernel shaft, incense,